



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

NORTHERN REGIONAL OFFICE

13901 Crown Court, Woodbridge, Virginia 22193

(703) 583-3800 Fax (703) 583-3821

www.deq.virginia.gov

Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

Thomas A. Faha
Regional Director

24 February 2015

Adrienne Fancher
Chief Operating Officer
Alexandria Renew Enterprises
1500 Eisenhower Avenue
Alexandria, VA 22314

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Re: Reissuance of VPDES Permit No. VA0025160
Alexandria Renew Enterprises Water Resource Reclamation Facility
City of Alexandria

Dear Ms. Fancher:

The Department of Environmental Quality (DEQ) has approved the enclosed effluent limitations and monitoring requirements for the aforementioned permit. Copies of your permit and fact sheet are enclosed.

A Discharge Monitoring Report (DMR) form for Outfall 001 or Outfall 002 is no longer included in the reissuance package since you are enrolled in DEQ's electronic DMR (eDMR) program. The first electronic DMR submittal for the month of March 2015 is due by 10 April 2015. Please reference the effluent limits in your permit and report monitoring results in eDMR to the same number of significant digits as set forth within the permit for each respective parameter. Should you have any questions regarding eDMR, the regional contact is Rebecca Vice and she may be contacted at 703-583-3922 or via email at Rebecca.Vice@deq.virginia.gov.

Please note that compliance with the permit's requirements for use and disposal of sewage sludge does not relieve you of your responsibility to comply with federal requirements set forth in 40 CFR Part 503. Until DEQ seeks and is granted authority to administer the Part 503 regulations by EPA, treatment works treating domestic sewage should continue to work directly with EPA to comply with them. For more information, you may call the EPA Region III office in Philadelphia at 215-814-5735.

If this permit is to be reissued in five years, there are specific testing requirements associated with the Form 2A reissuance application that are different from the testing requirements in your permit. In order to provide the necessary data for Form 2A you may need to begin additional sampling during the term of this permit prior to receiving a reissuance reminder letter from this agency. Please look at Form 2A Part D (Expanded Effluent Testing Data) and Part E (Toxicity Testing Data) for the sampling requirements. Please note that DEQ and EPA will no longer accept waiver requests from the sampling or testing requirements in the application forms.


As provided by Rule 2A:2 of the Supreme Court of Virginia, you have thirty days from the date of service (the date you actually received this decision or the date it was mailed to you, whichever occurred first) within which to appeal this decision by filing a notice of appeal in accordance with the Rules of the Supreme Court of Virginia with the Director, Department of Environmental Quality. In the event that this decision is served on you by mail, three days are added to that period.

Alternately, any owner under §§ 62.1-44.16, 62.1-44.17, and 62.1-44.19 of the State Water Control Law aggrieved by any action of the State Water Control Board taken without a formal hearing, or by inaction of the Board, may demand in writing a formal hearing of such owner's grievance, provided a petition requesting such hearing is filed with the Board. Said petition must meet the requirements set forth in §1.23(b) of the Board's Procedural Rule No. 1. In cases involving actions of the Board, such petition must be filed within thirty days after notice of such action is mailed to such owner by certified mail.

A Reliability Class I is assigned to this facility and this facility has Class I licensed operator requirements.

Please contact Douglas Frasier at 703-583-3873 or via email at Douglas.Frasier@deq.virginia.gov, should you have any questions regarding the permit.

Respectfully,



Bryant Thomas
Regional Water Permits & Planning Manager

Enc.: Permit for VA0025160
Fact Sheet for VA0025160

cc: DEQ-Water, OWPP
EPA-Region III, 3WP12
Department of Health, Culpeper
Water Compliance, DEQ-NRO

**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY**

3/1/2015

Additional Reporting for Reclamation Systems Authorized by or in Association with a VPDES Permit

NAME Alexandria Renew Enterprises WRRF

ADDRESS 1500 Eisenhower Avenue

Alexandria, VA 22314

FACILITY

LOCATION 1500 Eisenhower Avenue

VA0025160

650

PERMIT NUMBER

DISCHARGE NUMBER

MONITORING PERIOD

DEPT. OF ENVIRONMENTAL QUALITY
(REGIONAL OFFICE)

Northern Regional Office

1309 Crown Court

Woodbridge, VA 22193

FROM

YEAR	MO	DAY	TO	YEAR	MO	DAY

FACILITY SPECIFIC CORRECTIVE ACTION THRESHOLD (CAT) OCCURRENCES	CAT PARAMETER (Check applicable parameter)	NUMBER OF CAT OCCURRENCES ¹	NUMBER OF CAT DIVERSIONS ²
	TURBIDITY <input type="checkbox"/>		
	TRC <input type="checkbox"/>		

¹. A corrective action threshold (CAT) occurrence is an event initiated by single measurement that exceeds the CAT for turbidity or falls below the CAT for TRC. Each measurement made during a CAT occurrence does not represent a separate CAT occurrence.

². On a separate sheet attached to the monthly monitoring report of the VPDES permit, indicate for each turbidity or TRC CAT diversion the date and time of the diversion, the first measurement of the turbidity or TRC CAT occurrence, the period between the first measurement of the turbidity or TRC CAT occurrence and the diversion, the non-compliant CAT measurement of turbidity or TRC resulting in the diversion, and the duration of the diversion.

On a separate sheet attached to the monthly monitoring report of the VPDES permit, provide for each bypass occurrence a general description of circumstances resulting in the bypass of the reclaimed water distribution system and appurtenances, the flow of the bypass, the duration of the bypass and whether the water of the bypass did or did not comply with the reclaimed water standards of the permit.

Have there been two or more consecutive monitoring results greater than the CAT for *E. coli* within the monitoring period of this report? ☐ Yes ☐ No
(Submit the Monthly Log Sheet for Reclaimed Water Bacterial Monitoring with this report to the DEQ Northern Regional Office.)

Were any bacterial monitoring samples collected outside the period of 10:00 a.m. to 4:00 p.m.? ☐ Yes ☐ No

I hereby certify under penalty of law that this document and all attached report forms were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	OPERATOR IN RESPONSIBLE CHARGE			DATE		
	TYPED OR PRINTED NAME	SIGNATURE	CERTIFICATE NO.	YR	MO	DAY
	PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT			DATE		
	TYPED OR PRINTED NAME	SIGNATURE	TELEPHONE	YR	MO	DAY

3/1/2015

Permit No.: VA0025160	Month:
Facility Name: Alexandria Renew Enterprises WRRF	Year:
Sampling Location:	

* Daily average turbidity is determined daily and is the arithmetic mean of hourly or more frequent discrete turbidity measurements recorded during a 24-hour period.

**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY**

3/1/2015

Monthly Log Sheet for Reclaimed Water Turbidity Monitoring

Operator in responsible charge:

Print or type name: _____

Signature: _____

Certificate No.: _____

Telephone No.: _____

Date: _____

3/1/2015

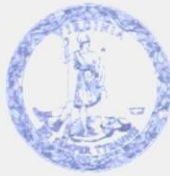
[illegible]

**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY**

3/1/2015

Monthly Log Sheet for Reclaimed Water Bacteria Monitoring

Print name(s) of person(s) collecting samples: _____ _____	Print name(s) of person(s) or contract laboratory analyzing samples: _____ _____
Operator in responsible charge: Print or type name: _____ Signature: _____ Certificate No.: _____ Telephone No.: _____ Date: _____	



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Permit No. **VA0025160**
Effective Date: **March 1, 2015**
Expiration Date: **February 29, 2020**

AUTHORIZATION TO DISCHARGE UNDER THE
VIRGINIA POLLUTANT DISCHARGE ELIMINATION SYSTEM AND THE VIRGINIA STATE
WATER CONTROL LAW AND TO PRODUCE OR DISTRIBUTE RECLAIMED WATER UNDER
THE WATER RECLAMATION AND REUSE REGULATION

In compliance with the provisions of the Clean Water Act as amended and pursuant to the State Water Control Law and regulations adopted pursuant thereto, the following owner is authorized to discharge in accordance with the information submitted with the permit application, and with this permit cover page, Part I – Effluent Limitations and Monitoring Requirements, Part II – Conditions Applicable To All VPDES Permits, Part III – Reclamation and Reuse Conditions and Requirements and Part IV – Biosolids Limitations and Monitoring Requirements, as set forth herein.

Owner Name: City of Alexandria, Virginia, Sanitation Authority
d/b/a Alexandria Renew Enterprises
Facility Name: Alexandria Renew Enterprises Water Resources Recovery Facility
City: Alexandria
Facility Location: 1500 Eisenhower Avenue, Alexandria, VA 22314

The owner is authorized to discharge to the following receiving streams:

Stream Names: Hunting Creek / Hooff Run
River Basin: Potomac River
River Subbasin: Potomac River
Section: 6
Class: II
Special Standards: b, y

Thomas A. Faha
Director, Northern Regional Office
Department of Environmental Quality

March 1, 2015

Date

A. Effluent Limitations and Monitoring Requirements

1. Outfalls 003, 005, 007, 009, 011, 013, 015 – Non-contaminated Stormwater

- a. There shall be no discharge of floating solids or visible foam in other than trace amounts.
- b. During the period beginning with the permit's effective date and lasting until the expiration date, the permittee is authorized to discharge stormwater from Outfall Numbers 003, 005, 007, 009, 011, 013 and 015.
- c. There shall be no discharge of process wastewaters from these outfalls.

(The remainder of this page intentionally left blank)

2. Outfall 001 – 54 MGD Facility

- a. There shall be no discharge of floating solids or visible foam in other than trace amounts.
- b. This facility has Total Nitrogen and Total Phosphorus calendar year load limits associated with this outfall included in the current Registration List under registration number VAN010059, enforceable under the General VPDES Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Dischargers and Nutrient Trading in the Chesapeake Watershed in Virginia.
- c. During the period beginning with the permit's effective date and lasting until the expiration date or the issuance of the CTO for the 54 MGD nutrient upgrades, whichever occurs first, the permittee is authorized to discharge from Outfall Number 001. Such discharges shall be limited and monitored by the permittee as specified below.

Parameter	Discharge Limitations				Monitoring Requirements			
	Monthly Average ⁽¹⁾		Weekly Average ⁽¹⁾		Minimum	Maximum ⁽¹⁾	Frequency	Sample Type
Flow ⁽²⁾ (MGD)	NL		NA		NA	NL	Continuous	TIRE
pH	NA		NA		6.0 S.U.	9.0 S.U.	1/D	Grab
cBOD ₅	5 mg/L	1000 kg/day	8 mg/L	1600 kg/day	NA	NA	1/D	24H-C
Total Suspended Solids (TSS)	6.0 mg/L	1200 kg/day	9.0 mg/L	1800 kg/day	NA	NA	1/D	24H-C
Dissolved Oxygen (DO)	NA		NA		6.0 mg/L	NA	1/D	Grab
Total Kjeldahl Nitrogen (TKN)	NL mg/L		NL mg/L		NA	NA	3D/W	24H-C
Ammonia, as N (April – October)	1.0 mg/L	200 kg/day	4.4 mg/L	900 kg/day	NA	NA	1/D	24H-C
Ammonia, as N (November – January)	8.4 mg/L		10 mg/L		NA	NA	1/D	24H-C
Ammonia, as N (February – March)	6.9 mg/L		8.5 mg/L		NA	NA	1/D	24H-C
<i>E. coli</i> (Geometric Mean)	126 n/100 mL		NA		NA	NA	1/D	Grab
Nitrate+Nitrite, as N	NL mg/L		NA		NA	NA	3D/W	24H-C
Total Nitrogen ⁽³⁾	NL mg/L		NA		NA	NA	3D/W	Calculated
Total Nitrogen – Year to Date ⁽⁴⁾	NL mg/L		NA		NA	NA	1/M	Calculated
Total Nitrogen – Calendar Year ^{(4) (5) (6) (7)}	6.0 mg/L		NA		NA	NA	1/Y	Calculated
Total Phosphorus	0.18 mg/L	81 lb/day	0.27 mg/L	120 lb/day	NA	NA	1/D	24H-C
Chronic Toxicity – <i>C. dubia</i> ⁽⁸⁾	NA		NA		NA	NL TU _c	1/Y	24H-C
Chronic Toxicity – <i>P. promelas</i> ⁽⁸⁾	NA		NA		NA	NL TU _c	1/Y	24H-C

⁽¹⁾ See Part I.B.

MGD = Million gallons per day.

1/D = Once every day.

⁽²⁾ The design flow is 54 MGD.

NA = Not applicable.

3D/W = Three times every week.

⁽³⁾ Total Nitrogen is the sum of Total Kjeldahl Nitrogen and NO₂+NO₃ Nitrogen and shall be calculated from the results of those tests.

NL = No limit; monitor and report.

1/M = Once every month.

S.U. = Standard units.

1/Y = Once every calendar year.

TIRE = Totalizing, indicating and recording equipment.

⁽⁴⁾ See Part I.B.3. for Nutrient Reporting Calculations.⁽⁵⁾ See Part I.E.4. for CTC/CTO Requirement for Nutrient Upgrades.⁽⁶⁾ Should the permittee discharge from Outfall 002, the Total Nitrogen effluent data from Outfall 001 and Outfall 002 shall be averaged together for compliance reporting purposes.⁽⁷⁾ See Part I.E.9. for Total Nitrogen – Annual Average Concentration.⁽⁸⁾ See Part I.D. for Whole Effluent Toxicity Program Requirements.

24H-C = A flow proportional composite sample collected manually or automatically, and discretely or continuously, for the entire discharge of the monitored 24-hour period.

Where discrete sampling is employed, the permittee shall collect a minimum of twenty-four (24) aliquots for compositing. Discrete sampling may be flow proportioned either by varying the time interval between each aliquot or the volume of each aliquot. Time composite samples consisting of a minimum of twenty-four (24) grab samples obtained at hourly or smaller intervals may be collected where the permittee demonstrates that the discharge flow rate (gallons per minute) does not vary by 10% or more during the monitored discharge.

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

3. Outfall 002 (Emergency Outfall) – 54 MGD Facility

- a. There shall be no discharge of floating solids or visible foam in other than trace amounts.
- b. This facility has Total Nitrogen and Total Phosphorus calendar year load limits associated with this outfall included in the current Registration List under registration number VAN010059, enforceable under the General VPDES Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Dischargers and Nutrient Trading in the Chesapeake Watershed in Virginia.
- c. During the period beginning with the permit's effective date and lasting until the expiration date or the issuance of the CTO for the 54 MGD nutrient upgrades, whichever occurs first, the permittee is authorized to discharge from Outfall Number 002. Such discharges shall be limited and monitored by the permittee as specified below.

Parameter	Discharge Limitations				Monitoring Requirements	
	Monthly Average ⁽¹⁾		Weekly Average ⁽¹⁾		Frequency	Sample Type
Flow ⁽²⁾ (MGD)	NL		NA		Continuous	TIRE
pH	NA		NA		1/D	Grab
cBOD ₅	5 mg/L	1000 kg/day	8 mg/L	1600 kg/day	1/D	24H-C
Total Suspended Solids (TSS)	6.0 mg/L	1200 kg/day	9.0 mg/L	1800 kg/day	1/D	24H-C
Dissolved Oxygen (DO)	NA		NA		1/D	Grab
Total Kjeldahl Nitrogen (TKN)	NL mg/L		NL mg/L		3D/W	24H-C
Ammonia, as N (April – October)	1.0 mg/L	200 kg/day	4.4 mg/L	900 kg/day	1/D	24H-C
Ammonia, as N (November – January)	8.4 mg/L		10 mg/L		1/D	24H-C
Ammonia, as N (February – March)	6.9 mg/L		8.5 mg/L		1/D	24H-C
<i>E. coli</i> (Geometric Mean)	126 n/100 mL		NA		1/D	Grab
Total Residual Chlorine (after dechlorination)	0.017 mg/L		0.018 mg/L		4/D	Grab
Nitrate+Nitrite, as N	NL mg/L		NA		3D/W	24H-C
Total Nitrogen ⁽³⁾	NL mg/L		NA		3D/W	Calculated
Total Nitrogen – Year to Date ⁽⁴⁾	NL mg/L		NA		1/M	Calculated
Total Nitrogen – Calendar Year ^{(4) (5) (6) (7)}	6.0 mg/L		NA		1/Y	Calculated
Total Phosphorus	0.18 mg/L	81 lb/day	0.27 mg/L	120 lb/day	1/D	24H-C
Chronic Toxicity – <i>C. dubia</i> ⁽⁸⁾	NA		NA		1/Y	24H-C
Chronic Toxicity – <i>P. promelas</i> ⁽⁸⁾	NA		NA		1/Y	24H-C

⁽¹⁾ See Part I.B.

MGD = Million gallons per day.

1/D = Once every day.

⁽²⁾ The design flow is 54 MGD.

NA = Not applicable.

4/D = Four times every day.

⁽³⁾ Total Nitrogen is the sum of Total Kjeldahl Nitrogen and NO₂+NO₃ Nitrogen and shall be calculated from the results of those tests.

NL = No limit; monitor and report.

3D/W = Three times every week.

S.U. = Standard units.

1/M = Once every month.

TIRE = Totalizing, indicating and recording equipment.

1/Y = Once every calendar year.

⁽⁴⁾ See Part I.B.3. for Nutrient Reporting Calculations.⁽⁵⁾ See Part I.E.4. for CTC/CTO Requirement for Nutrient Upgrades.⁽⁶⁾ Should the permittee discharge from Outfall 002, the Total Nitrogen effluent data from Outfall 001 and Outfall 002 shall be averaged together for compliance reporting purposes.⁽⁷⁾ See Part I.E.9. for Total Nitrogen – Annual Average Concentration.⁽⁸⁾ See Part I.D. for Whole Effluent Toxicity Program Requirements.

24H-C = A flow proportional composite sample collected manually or automatically, and discretely or continuously, for the entire discharge of the monitored 24-hour period. Where discrete sampling is employed, the permittee shall collect a minimum of twenty-four (24) aliquots for compositing. Discrete sampling may be flow proportioned either by varying the time interval between each aliquot or the volume of each aliquot. Time composite samples consisting of a minimum of twenty-four (24) grab samples obtained at hourly or smaller intervals may be collected where the permittee demonstrates that the discharge flow rate (gallons per minute) does not vary by 10% or more during the monitored discharge.

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

4. Outfall 001 – 54 MGD Facility

- a. There shall be no discharge of floating solids or visible foam in other than trace amounts.
- b. This facility has Total Nitrogen and Total Phosphorus calendar year load limits associated with this outfall included in the current Registration List under registration number VAN010059, enforceable under the General VPDES Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Dischargers and Nutrient Trading in the Chesapeake Watershed in Virginia.
- c. During the period beginning with the issuance of the CTO for the 54 MGD nutrient upgrades and lasting until the expiration date, the permittee is authorized to discharge from Outfall Number 001. Such discharges shall be limited and monitored by the permittee as specified below.

Parameter	Discharge Limitations				Monitoring Requirements	
	Monthly Average ⁽¹⁾		Weekly Average ⁽¹⁾		Frequency	Sample Type
Flow ⁽²⁾ (MGD)	NL		NA		Continuous	TIRE
pH	NA		NA		1/D	Grab
cBOD ₅	5 mg/L	1000 kg/day	8 mg/L	1600 kg/day	1/D	24H-C
Total Suspended Solids (TSS)	6.0 mg/L	1200 kg/day	9.0 mg/L	1800 kg/day	1/D	24H-C
Dissolved Oxygen (DO)	NA		NA		1/D	Grab
Total Kjeldahl Nitrogen (TKN)	NL mg/L		NL mg/L		3D/W	24H-C
Ammonia, as N (April – October)	1.0 mg/L	200 kg/day	4.4 mg/L	900 kg/day	1/D	24H-C
Ammonia, as N (November – January)	8.4 mg/L		10 mg/L		1/D	24H-C
Ammonia, as N (February – March)	6.9 mg/L		8.5 mg/L		1/D	24H-C
<i>E. coli</i> (Geometric Mean)	126 n/100 mL		NA		1/D	Grab
Nitrate+Nitrite, as N	NL mg/L		NA		3D/W	24H-C
Total Nitrogen ⁽³⁾	NL mg/L		NA		3D/W	Calculated
Total Nitrogen – Year to Date ⁽⁴⁾	NL mg/L		NA		1/M	Calculated
Total Nitrogen – Calendar Year ⁽⁴⁾⁽⁵⁾⁽⁶⁾	3.0 mg/L		NA		1/Y	Calculated
Total Phosphorus	0.18 mg/L	81 lb/day	0.27 mg/L	120 lb/day	1/D	24H-C
Chronic Toxicity – <i>C. dubia</i> ⁽⁷⁾	NA		NA		1/Y	24H-C
Chronic Toxicity – <i>P. promelas</i> ⁽⁷⁾	NA		NA		1/Y	24H-C

⁽¹⁾ See Part I.B.

MGD = Million gallons per day.

1/D = Once every day.

⁽²⁾ The design flow is 54 MGD.

NA = Not applicable.

3D/W = Three times every week.

⁽³⁾ Total Nitrogen is the sum of Total Kjeldahl Nitrogen and NO₂+NO₃ Nitrogen and shall be calculated from the results of those tests.

NL = No limit; monitor and report.

1/M = Once every month.

S.U. = Standard units.

1/Y = Once every calendar year.

TIRE = Totalizing, indicating and recording equipment.

⁽⁴⁾ See Part I.B.3. for Nutrient Reporting Calculations.⁽⁵⁾ Should the permittee discharge from Outfall 002, the Total Nitrogen effluent data from Outfall 001 and Outfall 002 shall be averaged together for compliance reporting purposes.⁽⁶⁾ See Part I.E.9. for Total Nitrogen – Annual Average Concentration.⁽⁷⁾ See Part I.D. for Whole Effluent Toxicity Program Requirements.

24H-C = A flow proportional composite sample collected manually or automatically, and discretely or continuously, for the entire discharge of the monitored 24-hour period. Where discrete sampling is employed, the permittee shall collect a minimum of twenty-four (24) aliquots for compositing. Discrete sampling may be flow proportioned either by varying the time interval between each aliquot or the volume of each aliquot. Time composite samples consisting of a minimum of twenty-four (24) grab samples obtained at hourly or smaller intervals may be collected where the permittee demonstrates that the discharge flow rate (gallons per minute) does not vary by 10% or more during the monitored discharge.

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

5. Outfall 002 (Emergency Outfall) – 54 MGD Facility

- a. There shall be no discharge of floating solids or visible foam in other than trace amounts.
- b. This facility has Total Nitrogen and Total Phosphorus calendar year load limits associated with this outfall included in the current Registration List under registration number VAN010059, enforceable under the General VPDES Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Dischargers and Nutrient Trading in the Chesapeake Watershed in Virginia.
- c. During the period beginning with the issuance of the CTO for the 54 MGD nutrient upgrades and lasting until the expiration date, the permittee is authorized to discharge from Outfall Number 002. Such discharges shall be limited and monitored by the permittee as specified below.

Parameter	Discharge Limitations				Monitoring Requirements			
	Monthly Average ⁽¹⁾		Weekly Average ⁽¹⁾		Minimum	Maximum ⁽¹⁾	Frequency	Sample Type
Flow ⁽²⁾ (MGD)	NL		NA		NA	NL	Continuous	TIRE
pH	NA		NA		6.0 S.U.	9.0 S.U.	1/D	Grab
cBOD ₅	5 mg/L	1000 kg/day	8 mg/L	1600 kg/day	NA	NA	1/D	24H-C
Total Suspended Solids (TSS)	6.0 mg/L	1200 kg/day	9.0 mg/L	1800 kg/day	NA	NA	1/D	24H-C
Dissolved Oxygen (DO)	NA		NA		6.0 mg/L	NA	1/D	Grab
Total Kjeldahl Nitrogen (TKN)	NL mg/L		NL mg/L		NA	NA	3D/W	24H-C
Ammonia, as N (April – October)	1.0 mg/L	200 kg/day	4.4 mg/L	900 kg/day	NA	NA	1/D	24H-C
Ammonia, as N (November – January)	8.4 mg/L		10 mg/L		NA	NA	1/D	24H-C
Ammonia, as N (February – March)	6.9 mg/L		8.5 mg/L		NA	NA	1/D	24H-C
<i>E. coli</i> (Geometric Mean)	126 n/100 mL		NA		NA	NA	1/D	Grab
Total Residual Chlorine (after dechlorination)	0.017 mg/L		0.018 mg/L		NA	NA	4/D	Grab
Nitrate+Nitrite, as N	NL mg/L		NA		NA	NA	3D/W	24H-C
Total Nitrogen ⁽³⁾	NL mg/L		NA		NA	NA	3D/W	Calculated
Total Nitrogen – Year to Date ⁽⁴⁾	NL mg/L		NA		NA	NA	1/M	Calculated
Total Nitrogen – Calendar Year ^{(4) (3) (6)}	3.0 mg/L		NA		NA	NA	1/Y	Calculated
Total Phosphorus	0.18 mg/L	81 lb/day	0.27 mg/L	120 lb/day	NA	NA	1/D	24H-C
Chronic Toxicity – <i>C. dubia</i> ⁽⁷⁾	NA		NA		NA	NL TU _c	1/Y	24H-C
Chronic Toxicity – <i>P. promelas</i> ⁽⁷⁾	NA		NA		NA	NL TU _c	1/Y	24H-C

⁽¹⁾ See Part I.B.

MGD = Million gallons per day.

1/D = Once every day.

⁽²⁾ The design flow is 54 MGD.

NA = Not applicable.

4/D = Four times every day.

⁽³⁾ Total Nitrogen is the sum of Total Kjeldahl Nitrogen and NO₂+NO₃ Nitrogen and shall be calculated from the results of those tests.

NL = No limit; monitor and report.

3D/W = Three times every week.

S.U. = Standard units.

1/M = Once every month.

TIRE = Totalizing, indicating and recording equipment.

1/Y = Once every calendar year.

⁽⁴⁾ See Part I.B.3. for Nutrient Reporting Calculations.⁽⁵⁾ Should the permittee discharge from Outfall 002, the Total Nitrogen effluent data from Outfall 001 and Outfall 002 shall be averaged together for compliance reporting purposes.⁽⁶⁾ See Part I.E.9. for Total Nitrogen – Annual Average Concentration.⁽⁷⁾ See Part I.D. for Whole Effluent Toxicity Program Requirements.

24H-C = A flow proportional composite sample collected manually or automatically, and discretely or continuously, for the entire discharge of the monitored 24-hour period.

Where discrete sampling is employed, the permittee shall collect a minimum of twenty-four (24) aliquots for compositing. Discrete sampling may be flow proportioned either by varying the time interval between each aliquot or the volume of each aliquot. Time composite samples consisting of a minimum of twenty-four (24) grab samples obtained at hourly or smaller intervals may be collected where the permittee demonstrates that the discharge flow rate (gallons per minute) does not vary by 10% or more during the monitored discharge.

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

B. Quantification Levels and Compliance Reporting**1. Quantification Levels**

- a. The quantification levels (QL) shall be less than or equal to the following concentrations:

<u>Characteristic</u>	<u>Quantification Level</u>
Total Suspended Solids (TSS)	1.0 mg/L
carbonaceous-Biochemical Oxygen Demand-5 day (cBOD ₅)	2 mg/L
Ammonia, as N	0.20 mg/L
Total Residual Chlorine (TRC)	0.10 mg/L

- b. The QL is defined as the lowest concentration used to calibrate a measurement system in accordance with the procedures published for the method. The permittee shall use any method in accordance with Part II A of this permit.
- c. It is the responsibility of the permittee to ensure that proper quality assurance/quality control (QA/QC) protocols are followed during the sampling and analytical procedures. QA/QC information shall be documented to confirm that appropriate analytical procedures have been used and the required QLs have been attained.

2. Compliance Reporting for parameters in Part I.A.

- a. Monthly Average – Compliance with the monthly average limitations and/or reporting requirements for the parameters listed in Part I.B.1.a of this permit condition shall be determined as follows: All concentration data below the QL used for the analysis (QL must be less than or equal to the QL listed in Part I.B.1.a above) shall be treated as zero. All concentration data equal to or above the QL used for the analysis shall be treated as it is reported. An arithmetic average shall be calculated using all reported data for the month, including the defined zeros. This arithmetic average shall be reported on the Discharge Monitoring Report (DMR) as calculated. If all data are below the QL used for the analysis, then the average shall be reported as "< QL". If reporting for quantity is required on the DMR and the reported monthly average concentration is < QL, then report "< QL" for the quantity. Otherwise use the reported concentration data (including the defined zeros) and flow data for each sample day to determine the daily quantity and report the monthly average of the calculated daily quantities.
- b. Maximum Weekly Average – Compliance with the weekly average limitations and/or reporting requirements for the parameters listed in Part I.B.1.a of this permit condition shall be determined as follows: All concentration data below the QL used for the analysis (QL must be less than or equal to the QL listed in Part I.B.1.a above) shall be treated as zero. All concentration data equal to or above the QL used for the analysis shall be treated as reported. An arithmetic average shall be calculated using all reported data, including the defined zeros, collected within each complete calendar week and entirely contained within the reporting month. The maximum value of the weekly averages thus determined shall be reported on the DMR. If all data are below the QL used for the analysis, then the weekly average shall be reported as "< QL". If reporting for quantity is required on the DMR and the reported weekly average concentration is < QL, then report "< QL" for the quantity. Otherwise use the reported concentration data (including the defined zeros) and flow data for each sample day to determine the daily quantity and report the maximum weekly average of the calculated daily quantities.
- c. Single Datum – Any single datum required shall be reported as "< QL" if it is less than the QL used in the analysis (QL must be less than or equal to the QL listed in Part I.B.1.a above). Otherwise the numerical value shall be reported.
- d. Significant Digits – The permittee shall report at least the same number of significant digits as the permit limit for a given parameter. Regardless of the rounding convention used (i.e., 5 always rounding up or to the nearest even number) by the permittee, the permittee shall use the convention consistently, and shall ensure that consulting laboratories employed by the permittee use the same convention.

3. Nutrient Reporting Calculations for Part I. A.

- a. For each calendar month, the DMR shall show the calendar year-to-date average concentration (mg/L) calculated in accordance with the following formulae:

$$MC_{avg}-YTD = (\sum_{(Jan-current\ month)} MC_{avg}) \div (\# \text{ of months})$$

where: $MC_{avg}-YTD$ = calendar year-to-date average concentration (mg/L)
 MC_{avg} = monthly average concentration (mg/L) as reported on DMR

- b. The total nitrogen and phosphorus average concentrations (mg/L) for each calendar year (AC) shall be shown on the December DMR due January 10th of the following year. These values shall be calculated in accordance with the following formulae:

$$AC_{avg} = (\sum_{(Jan-Dec)} MC_{avg}) \div 12$$

where: AC_{avg} = calendar year average concentration (mg/L)
 MC_{avg} = monthly average concentration (mg/L) as reported on DMR

- c. For total phosphorus, all daily concentration data below the quantification level (QL) for the analytical method used shall be treated as half the QL. All daily concentration data equal to or above the QL for the analytical method used shall be treated as it is reported.
- d. For total nitrogen (TN), if none of the daily concentration data for the respective species (i.e., nitrates/nitrites, TKN) are equal to or above the QL for the respective analytical methods used, the daily TN concentration value reported shall equal one half of the largest QL used for the respective species. If one of the data is equal to or above the QL, the daily TN concentration value shall be treated as that data point is reported. If more than one of the data is above the QL, the daily TN concentration value shall equal the sum of the data points as reported.

C. Pretreatment Requirements

1. The permittee's pretreatment program has been approved. The program is an enforceable part of this permit. The permittee shall:
 - a. Within one year of the effective date of this permit, the permittee shall develop or reevaluate the local limits using current influent, effluent and sludge monitoring data and submit the data and results of the evaluation to DEQ-NRO.
 - b. Maintain a continuous industrial user survey program. Any changes to the program shall be submitted to DEQ-NRO within 90 days.
 - c. Submit to the DEQ-NRO an annual report that describes the permittee's program activities over the previous year. The annual report shall be submitted no later than January 31st of each year and shall include:
 - 1) An updated list of the SIUs to include Categorical Industrial Users (CIUs), as defined in subdivision 3.c. of this section, noting all of the following:
 - a) Facility address and contact name, including email and phone number;
 - b) Contact information, SIC Codes and NAICS Codes for each SIU/CIU;
 - c) Explanation of SIUs deleted from the previous year's list;
 - d) Identify which IUs are subject to Categorical Standards and note which Standard (i.e., metal finishing);
 - e) Specify which 40 CFR part(s) is/are applicable;
 - f) Indicate which IUs are subject to local standards that are more stringent than Categorical Pretreatment Standards;

- g) Indicate which IUs are subject only to local requirements;
 - h) Identify which IUs are subject to Categorical Pretreatment Standards that are subject to reduced reporting requirements under 9VAC25-31-840.E.3.; and
 - i) Identify which IUs are non-significant Categorical Industrial Users (NSCIUs).
- 2) A summary of the compliance status of each SIU with pretreatment standards and permit requirements.
 - 3) A summary of the number and types of SIU sampling and inspections performed by the POTW.
 - 4) All information concerning any interference, upset, VPDES permit or Water Quality Standards violations directly attributable to SIUs and enforcement actions taken to alleviate said events.
 - 5) A description of all enforcement actions taken against SIUs over the previous 12 months.
 - 6) A summary of any changes to the submitted pretreatment program that has not been previously reported to the DEQ-NRO.
 - 7) A summary of the permits issued to SIUs since the last annual report.
 - 8) POTW and self-monitoring results for SIUs determined to be in significant non-compliance during the reporting period.
 - 9) Results of the POTW's influent/effluent/sludge sampling, not previously submitted to the DEQ-NRO.
 - 10) Copies of newspaper publications of all SIUs in significant non-compliance during the reporting period. This is due no later than March 31st of each year.
 - 11) Signature of an authorized representative.
- d. Submit any changes to the approved pretreatment program to the DEQ-NRO within 90 days of changes and obtain approval before implementation of the changes.
 - e. Ensure all SIU permits are issued and reissued in a timely manner and that the SIU permits issued by the POTW are effective and enforceable.
 - f. Inspect and sample all SIUs at a minimum of once a year.
 - 1) Sampling shall include all regulated parameters, and shall be representative of the wastewater discharged. The Federal Categorical Standards apply at the end-of-process or the end of treatment if it exists. Therefore, all CIUs shall be sampled at the end of any categorical process or at the end of treatment unless a standard specifies a different location to collect a sample. If process effluent is mixed prior to treatment with unregulated wastestreams or dilution water or if local limits apply at a different point, the combined wastestream formula (CWF) or flow weighted average (FWA) formula must be used (see the VPDES Permit Regulation at 9VAC25-31-780.E). If a SIU is not categorical, sampling may be conducted from a location(s) that reflects the total regulated effluent flow.
 - 2) Inspection of the SIUs shall cover all areas that could result in wastewater discharge to the treatment works including manufacturing, chemical storage, pretreatment facilities, spill prevention and control procedures, hazardous waste generation and SIU self monitoring and records.
 - g. Implement the reporting requirements of Part VII of the VPDES Permit Regulation (9VAC25-31-730 through 9VAC25-31-900).

- h. Review the Legal Authority and Enforcement Response Plan (ERP) as necessary to ensure they meet state and federal regulatory requirements. The approved Legal Authority and ERP are enforceable parts of this permit and shall be implemented.
 - i. Ensure that adequate resources are available to implement the approved program.
 - j. Meet all public participation requirements and annually public notice SIUs in significant non-compliance with pretreatment standards and requirements for the previous 12 months.
- 2. The DEQ may require the POTW to institute changes to its pretreatment program:
 - a. If the approved program is not implemented in a way satisfying the requirements of the Clean Water Act, Water Control Law or State regulations;
 - b. If problems such as pass-through, interference, water quality standards violations or sludge contamination develop or continue; and
 - c. If federal, state or local requirements change.
- 3. Program Streamlining:
 - a. The Control Authority may determine that an IU subject to categorical Pretreatment Standards under 9VAC25-31-780 and 40 CFR chapter I, subchapter N is a NSCIU rather than a SIU on a finding that the IU never discharges more than 100 gallons per day (gpd) of total categorical wastewater (excluding sanitary, non-contact cooling and boiler blowdown wastewater, unless specifically included in the Pretreatment Standard) and the following conditions are met:
 - 1) The IU, prior to Control Authority's finding, has consistently complied with all applicable categorical Pretreatment Standards and Requirements;
 - 2) The IU annually submits the certification statement required in 9VAC25-31-840 together with any additional information necessary to support the certification statement; and
 - 3) The IU never discharges any untreated concentrated wastewater.
 - b. Upon a finding that an IU, meeting the criteria in subdivision 3.c.2 and 3 below, has no reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement, the control authority may at any time, on its own initiative or in response to a petition received from an IU or POTW and in accordance with Part VII (9VAC25-31-730 et seq.) of this chapter, determine that such IU is not a SIU.
 - c. A SIU is an IU that:
 - 1) Is subject to Categorical Pretreatment Standards under 9VAC25-31-780 and incorporated by reference in 9VAC25-31-30;
 - 2) Discharges an average of 25,000 gallons per workday or more of process wastewater to the POTW (excluding sanitary, noncontact cooling water, and boiler blowdown wastewater);
 - 3) Contributes a process waste stream that makes up 5% or more of the average dry weather hydraulic or organic capacity of the POTW; or
 - 4) Has reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement.

D. Whole Effluent Toxicity Program Requirements**1. Biological Monitoring**

- a. In accordance with the schedule in Part I.D.2. below, the permittee shall conduct annual chronic toxicity tests during this permit term. The permittee shall collect 24-hour flow-proportioned composite samples of final effluent from Outfall 001.

The chronic tests to use are:

Chronic 3-Brood Static Renewal Survival and Reproduction Test using *Ceriodaphnia dubia*

Chronic 7-Day Static Renewal Survival and Growth Test using *Pimephales promelas*

These chronic tests shall be conducted in such a manner and at sufficient dilutions (minimum of five dilutions) to determine the "No Observed Effect Concentration" (NOEC) for survival and reproduction or growth. Results which cannot be quantified (i.e., a "less than" NOEC value) are not acceptable and a retest shall be performed. The NOEC, as determined by hypothesis testing, shall be converted to TU_c (Chronic Toxic Units) for Discharge Monitoring Report (DMR) reporting where $TU_c = 100/NOEC$. Report the LC_{50} at 48 hours and the IC_{25} with the NOEC's in the test report.

- b. The permittee may provide additional samples to address data variability. These data shall be reported. Test procedures and reporting shall be in accordance with the WET testing methods cited in 40 CFR 136.3.
- c. The test dilutions shall be able to determine compliance with the following endpoints:
- Chronic NOEC $\geq 34\%$; equivalent to a $TU_c \leq 2.94$
- d. The test data will be evaluated statistically for reasonable potential at the conclusion of the test period. The data may be evaluated sooner if requested by the permittee or if toxicity has been noted. Should evaluation of the data indicate that a limit is warranted, a WET limit and compliance schedule will be required.
- e. The permit may be modified or revoked and reissued to include pollutant specific limits in lieu of a WET limit should it be demonstrated that toxicity is due to specific parameters. The pollutant specific limitation shall control the toxicity of the effluent.
- f. Should the permittee conduct toxicity testing of the effluent prior to the compliance date listed in the schedule in Part I.D.2. below, the results of the test report shall be reported with the DMR for the month following the receipt of the testing results. In no case shall this exceed 45 days from the receipt of the test results or the report submission dates below, whichever may occur first.

2. Reporting Schedule

The permittee shall monitor during the specified period; shall report the results on the DMR; and shall supply one copy of the toxicity test report specified in this Whole Effluent Toxicity Program in accordance with the following schedule:

Period	Sampling Period	DMR/Report Submission Dates
Annual 1	1 January 2016 – 31 December 2016	10 January 2017
Annual 2	1 January 2017 – 31 December 2017	10 January 2018
Annual 3	1 January 2018 – 31 December 2018	10 January 2019
Annual 4	1 January 2019 – 31 December 2019	10 January 2020

E. Other Requirements and Special Conditions**1. 95% Capacity Reopener**

A written notice and a plan of action for ensuring continued compliance with the terms of this permit shall be submitted to the DEQ-Northern Regional Office (DEQ-NRO) when the monthly average flow influent to the sewage treatment plant reaches 95% of the design capacity authorized in this permit for each month of any three consecutive month period. The written notice shall be submitted within 30 days and the plan of action shall be received at the DEQ-NRO no later than 90 days from the third consecutive month for which the flow reached 95% of the design capacity. The plan shall include the necessary steps and a prompt schedule of implementation for controlling any current or reasonably anticipated problem resulting from high influent flows. Failure to submit an adequate plan in a timely manner shall be deemed a violation of this permit.

2. Indirect Dischargers

The permittee shall provide adequate notice to the Department of the following:

- a. Any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Section 301 or 306 of Clean Water Act and the State Water Control Law if it were directly discharging those pollutants; and
- b. Any substantial change in the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of this permit.
- c. Adequate notice shall include information on (i) the quality and quantity of effluent introduced into the treatment works, and (ii) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the treatment works.

3. Operation and Maintenance (O&M) Manual Requirement

The permittee shall maintain a current Operations and Maintenance (O&M) Manual for the treatment works that is in accordance with Virginia Pollutant Discharge Elimination System Regulations, 9VAC25-31 and Sewage Collection and Treatment Regulations, 9VAC25-790.

The O&M Manual and subsequent revisions shall include the manual effective date and meet Part II.K.2 and Part II.K.4 Signatory Requirements of the permit. Any changes in the practices and procedures followed by the permittee shall be documented in the O&M Manual within 90 days of the effective date of the changes. The permittee shall operate the treatment works in accordance with the O&M Manual and shall make the O&M manual available to Department personnel for review during facility inspections. Within 30 days of a request by DEQ, the current O&M Manual shall be submitted to the DEQ-NRO for review and approval.

The O&M Manual shall detail the practices and procedures which will be followed to ensure compliance with the requirements of this permit. This manual shall include, but not necessarily be limited to, the following items, as appropriate:

- a. Permitted outfall locations and techniques to be employed in the collection, preservation and analysis of effluent and sludge samples;
- b. Procedures for measuring and recording the duration and volume of treated wastewater discharged;
- c. Discussion of Best Management Practices, if applicable;
- d. Procedures for handling, storing and disposing of all wastes, fluids and pollutants that will prevent these materials from reaching state waters. List type and quantity of wastes, fluids and pollutants (e.g. chemicals) stored at this facility;
- e. Discussion of treatment works design, treatment works operation, routine preventative maintenance of units within the treatment works, critical spare parts inventory and record keeping;

- f. Plan for the management and/or disposal of waste solids and residues;
- g. Hours of operation and staffing requirements for the plant to ensure effective operation of the treatment works and maintain permit compliance;
- h. List of facility, local and state emergency contacts; and
- i. Procedures for reporting and responding to any spills/overflows/ treatment works upsets.

4. Certificate to Construct/Certificate to Operate Requirement for Nutrient Upgrades

The permittee shall, in accordance with *Sewage Collection and Treatment* regulation (9VAC25-790) obtain a Certificate to Construct (CTC) and a Certificate to Operate (CTO) from the Department of Environmental Quality DEQ Office of Wastewater Engineering (for Water Quality Improvement Funded (WQIF) projects) or submitted by the design engineer and owner to the DEQ regional water permit manager (for non WQIF projects) prior to constructing wastewater treatment works and operating the treatment works respectively. Non-compliance with the CTC or CTO shall be deemed a violation of the permit.

5. Certificate to Construct/Certificate to Operate Requirement

In accordance with *Sewage Collection and Treatment* regulation (9VAC25-790), the permittee shall obtain a Certificate to Construct (CTC) and a Certificate to Operate (CTO) from the Department of Environmental Quality prior to constructing wastewater treatment works and operating the treatment works, respectively. Non-compliance with the CTC or CTO shall be deemed a violation of the permit.

6. Licensed Operator Requirement

The permittee shall employ or contract at least one Class I licensed wastewater works operator for this facility. The license shall be issued in accordance with Title 54.1 of the Code of Virginia and the regulations of the Board for Waterworks and Wastewater Works Operators. The permittee shall notify the Department in writing whenever he is not complying, or has grounds for anticipating he will not comply with this requirement. The notification shall include a statement of reasons and a prompt schedule for achieving compliance.

7. Reliability Class

The permitted treatment works shall meet Reliability Class I.

8. E3/E4

The annual average concentration limitations for total nitrogen and/or total phosphorus are suspended during any calendar year in which the facility is considered by DEQ to be a participant in the Virginia Environmental Excellence Program in good standing at either the Exemplary Environmental Enterprise (E3) level or the Extraordinary Environmental Enterprise (E4) level, provided that the following conditions have also been met:

- a. The facility has applied for (or renewed) participation, been accepted, maintained a record of sustained compliance and submitted an annual report according to the program guidelines;
- b. The facility has demonstrated that they have in place a fully implemented environmental management system (EMS) with an alternative compliance method that includes operation of installed nutrient removal technologies to achieve the annual average concentration limitations; and
- c. The E3/E4 designation from DEQ and implementation of the EMS has been in effect for the full calendar year.

The annual average concentration limitations for total nitrogen and/or total phosphorus, as applicable, are not suspended in any calendar year following a year in which the facility failed to achieve the annual average concentration limitations as required by b. above.

9. Total Nitrogen – Annual Average Concentration

The permittee shall maintain and operate the facility as to optimize total nitrogen (TN) removal during the Nutrient Removal Technology (NRT) upgrades. An annual average TN concentration of 3.0 mg/L shall take effect January 1st following issuance of the CTO upon completion of the 54 MGD plant upgrades.

10. Final Effluent Monitoring Alternative

The permittee may develop an effluent specific correlation between carbonaceous-biochemical oxygen demand-5 day (cBOD₅) and total organic carbon (TOC)/chemical oxygen demand (COD) for final effluent compliance monitoring as specified below:

- a. The permittee must submit to DEQ for review and approval a plan of study prior to the start of the study. The study shall include, at a minimum, the following information:
 - 1) The method of analysis for TOC/COD;
 - 2) The quality assurance (QA)/quality control (QC) procedures for the method;
 - 3) The time frame for the study;
 - 4) The number of samples to be analyzed to establish the correlation;
 - 5) The statistical methods for determining the correlation; and
 - 6) The method of validating the established correlation.
- b. Once the study is completed and a correlation is established, the data, QA/QC information and correlation calculations are to be submitted to DEQ for review and approval. Upon DEQ's approval of the results, final effluent monitoring for TOC/COD will be once per day and sampling will be 24-hour composites. Monitoring for cBOD₅ shall be reduced to once per week for the remaining term of the permit. TOC/COD shall be reported in accordance with Part II.C.
- c. The permittee shall validate the established correlation monthly, as outlined in the plan of study and submit the validation with the monthly DMR. The permittee shall also submit a summary of the validation data with the permit application at least 180 days prior to the expiration of the current permit. The method of validation in the plan of study shall be an enforceable part of the permit.
- d. DEQ may require the resumption of cBOD₅ daily monitoring should it determine that the correlation is no longer valid. The permittee may discontinue TOC/COD final effluent monitoring and return to cBOD₅ monitoring upon notifying DEQ in writing. TOC/COD daily monitoring will cease the first day of the following month after notification.

11. Nutrient Reopener

This permit may be modified or, alternatively, revoked and reissued:

- a. If any approved wasteload allocation procedure, pursuant to Section 303(d) of the Clean Water Act, imposes wasteload allocations, limits or conditions on the facility that are not consistent with the permit requirements;
- b. To incorporate technology-based effluent concentration limitations for nutrients in conjunction with the installation of nutrient control technology, whether by new construction, expansion or upgrade, or
- c. To incorporate alternative nutrient limitations and/or monitoring requirements, should:
 - i. the State Water Control Board adopt new nutrient standards for the water body receiving the discharge, including the Chesapeake Bay or its tributaries; or

- ii. a future water quality regulation or statute require new or alternative nutrient control.

12. Polychlorinated biphenyls (PCB) Pollutant Minimization Plan

The permittee has completed low-detection level, congener specific monitoring of the effluent for PCBs.

a. Pollutant Minimization Plan (PMP)

Upon notification from DEQ-NRO that the PCB monitoring results for the effluent indicate a reasonable potential to exceed the water quality criterion or an actual exceedance of the Wasteload Allocation specified in the PCB TMDL for the Tidal Portions of the Potomac and Anacostia Rivers in the District of Columbia, Maryland and Virginia (approved 31 October 2007 by EPA), the permittee shall submit to DEQ-NRO for review and approval a Pollutant Minimization Plan (PMP) designed to investigate the location and potential reduction of sources of PCBs in the collection system. The PMP shall be submitted within 180 days of the date of the notification letter.

The PMP shall detail the practices and procedures which will be followed to investigate the location and potential reduction of sources of PCBs. This PMP shall include, but not necessarily be limited to, the following items, as appropriate:

- 1) Provide a facility contact for the contents of the PMP and any activities associated with the PMP;
- 2) Provide a proposed implementation schedule for minimization activities and prospective milestones;
- 3) Propose actions for known or probable sources;
- 4) Propose actions to find and control unknown sources;
- 5) Summarize any previous minimization activities;
- 6) Present methods for measuring, demonstrating, and reporting progress;
 - i) May include an evaluation of the total PCBs and/or PCB congener distribution in the initial source intake water to determine the net contributions of PCBs introduced to the treatment works.
 - ii) May include raw influent testing using either grab or composite samples as well as sampling upstream in the collection system. Screening methods may be utilized to target specific areas of interest.
 - iii) Alternative PCB test methods are acceptable provided analytical sensitivity is sufficient for detection and quantification.
 - iv) May perform further monitoring of the final effluent to determine effectiveness of the reduction efforts and to reestablish a new baseline for PCBs in the final effluent.
- 7) Estimate the PCB load reduction provided by treatment; and
- 8) Provide information on continuing assessment of progress, which may include establishment of criteria to evaluate whether the location and potential reduction of PCB sources has been addressed, and whether a more routine follow-up awareness, education, and inspection approach is appropriate.

b. Pollutant Minimization Plan (PMP) Annual Report

If the permittee is required to implement a PMP in accordance with this special condition, an Annual Report shall be submitted to DEQ-NRO for review and approval by February 10th for the previous year's PMP activities.

The Annual Report shall:

- 1) Summarize PMP Achievement for investigating the location and potential reduction of sources of PCBs in the collection system during the past calendar year;

- 2) Address any revisions needed for the PMP for the coming year;
- 3) Address material and process modifications, if applicable;
- 4) Summarize measures taken to address known, probable and potential sources; and
- 5) Discuss incremental and cumulative changes from the baseline loading.

13. Hooff Run Junction Chamber

The permittee shall commence an engineering evaluation of options/alternatives to study the need, feasibility and possible means of minimizing the occurrence of wet weather overflows at the Hooff Run Junction Chamber. Annual progress reports detailing the alternatives explored and criteria utilized during the evaluations shall be due on or before 31 December 2015 and 31 December 2016. The final study and any proposed plan and implementation schedule should be compatible with the City of Alexandria's Long Term Control Plan Update, due 23 August 2016, as required for its Combined Sewer System permit VA0087068 and shall be submitted to DEQ-NRO for review and approval on or before 31 December 2017 or one year from date of DEQ approval of the City's final LTCPU, whichever occurs later.

14. Four Mile Run Pump Station

The permittee shall submit plans, specifications and a tentative schedule detailing capital improvements to minimize pump failures/possible overflow occurrences at the Four Mile Run Pump Station on or before 31 December 2015. An annual progress report is due on or before 31 December 2016. Improvements shall be completed by 31 December 2017. The permittee shall submit a completion statement within 90 days of completion.

15. Total Maximum Daily Load (TMDL) Reopener

This permit shall be modified or alternatively revoked and reissued if any approved wasteload allocation procedure, pursuant to Section 303(d) of the Clean Water Act, imposes wasteload allocations, limits or conditions on the facility that are not consistent with the permit requirements.

CONDITIONS APPLICABLE TO ALL VPDES PERMITS

A. Monitoring

1. Samples and measurements required by this permit shall be taken at the permit designated or approved location and be representative of the monitored activity.
 - a. Monitoring shall be conducted according to procedures approved under Title 40 Code of Federal Regulations Part 136 or alternative methods approved by the U.S. Environmental Protection Agency, unless other procedures have been specified in this permit.
 - b. The permittee shall periodically calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals that will insure accuracy of measurements.
 - c. Samples taken shall be analyzed in accordance with 1VAC30-45, Certification for Noncommercial Environmental Laboratories, or 1VAC30-46, Accreditation for Commercial Environmental Laboratories.
2. Any pollutant specifically addressed by this permit that is sampled or measured at the permit designated or approved location more frequently than required by this permit shall meet the requirements in A 1 a through c above and the results of this monitoring shall be included in the calculations and reporting required by this permit.
3. Operational or process control samples or measurements shall not be taken at the designated permit sampling or measurement locations. Operational or process control samples or measurements do not need to follow procedures approved under Title 40 Code of Federal Regulations Part 136 or be analyzed in accordance with 1VAC30-45, Certification for Noncommercial Environmental Laboratories, or 1VAC30-46, Accreditation for Commercial Environmental Laboratories.

B. Records

1. Records of monitoring information shall include:
 - a. The date, exact place, and time of sampling or measurements;
 - b. The individual(s) who performed the sampling or measurements;
 - c. The date(s) and time(s) analyses were performed;
 - d. The individual(s) who performed the analyses;
 - e. The analytical techniques or methods used; and
 - f. The results of such analyses.
2. Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years, the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period of retention shall be extended automatically during the course of any unresolved litigation regarding the regulated activity or regarding control standards applicable to the permittee, or as requested by the Board.

C. Reporting Monitoring Results

1. The permittee shall submit the results of the monitoring required by this permit not later than the 10th day of the month after monitoring takes place, unless another reporting schedule is specified elsewhere in this permit.

Monitoring results shall be submitted to:

Department of Environmental Quality – Northern Regional Office (DEQ-NRO)
13901 Crown Court
Woodbridge, VA 22193

2. Monitoring results shall be reported on a Discharge Monitoring Report (DMR) or on forms provided, approved or specified by the Department.
3. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this permit.

D. Duty to Provide Information

The permittee shall furnish to the Department, within a reasonable time, any information which the Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Board may require the permittee to furnish, upon request, such plans, specifications, and other pertinent information as may be necessary to determine the effect of the wastes from this discharge on the quality of state waters, or such other information as may be necessary to accomplish the purposes of the State Water Control Law. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.

E. Compliance Schedule Reports

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

F. Unauthorized Discharges

Except in compliance with this permit, or another permit issued by the Board, it shall be unlawful for any person to:

1. Discharge into state waters sewage, industrial wastes, other wastes, or any noxious or deleterious substances; or
2. Otherwise alter the physical, chemical or biological properties of such state waters and make them detrimental to the public health, or to animal or aquatic life, or to the use of such waters for domestic or industrial consumption, or for recreation, or for other uses.

G. Reports of Unauthorized Discharges

Any permittee who discharges or causes or allows a discharge of sewage, industrial waste, other wastes or any noxious or deleterious substance into or upon state waters in violation of Part II.F.; or who discharges or causes or allows a discharge that may reasonably be expected to enter state waters in violation of Part II.F., shall notify the Department of the discharge immediately upon discovery of the discharge, but in no case later than 24 hours after said discovery. A written report of the unauthorized discharge shall be submitted to the Department, within five days of discovery of the discharge. The written report shall contain:

1. A description of the nature and location of the discharge;
2. The cause of the discharge;
3. The date on which the discharge occurred;
4. The length of time that the discharge continued;
5. The volume of the discharge;
6. If the discharge is continuing, how long it is expected to continue;
7. If the discharge is continuing, what the expected total volume of the discharge will be; and

8. Any steps planned or taken to reduce, eliminate and prevent a recurrence of the present discharge or any future discharges not authorized by this permit.

Discharges reportable to the Department under the immediate reporting requirements of other regulations are exempted from this requirement.

H. Reports of Unusual or Extraordinary Discharges

If any unusual or extraordinary discharge including a bypass or upset should occur from a treatment works and the discharge enters or could be expected to enter state waters, the permittee shall promptly notify, in no case later than 24 hours, the Department by telephone after the discovery of the discharge. This notification shall provide all available details of the incident, including any adverse affects on aquatic life and the known number of fish killed. The permittee shall reduce the report to writing and shall submit it to the Department within five days of discovery of the discharge in accordance with Part II.I.2. Unusual and extraordinary discharges include but are not limited to any discharge resulting from:

1. Unusual spillage of materials resulting directly or indirectly from processing operations;
2. Breakdown of processing or accessory equipment;
3. Failure or taking out of service some or all of the treatment works; and
4. Flooding or other acts of nature.

I. Reports of Noncompliance

The permittee shall report any noncompliance which may adversely affect state waters or may endanger public health.

1. An oral report shall be provided within 24 hours from the time the permittee becomes aware of the circumstances. The following shall be included as information which shall be reported within 24 hours under this paragraph:
 - a. Any unanticipated bypass; and
 - b. Any upset which causes a discharge to surface waters.
2. A written report shall be submitted within 5 days and shall contain:
 - a. A description of the noncompliance and its cause;
 - b. The period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and
 - c. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

The Board may waive the written report on a case-by-case basis for reports of noncompliance under Part II.I. if the oral report has been received within 24 hours and no adverse impact on state waters has been reported.

3. The permittee shall report all instances of noncompliance not reported under Parts II, I.1. or I.2., in writing, at the time the next monitoring reports are submitted. The reports shall contain the information listed in Part II.I.2.

NOTE: The immediate (within 24 hours) reports required in Parts II, G., H. and I. may be made to the Department's Northern Regional Office at (703) 583-3800 (voice) or (703) 583-3821 (fax) or online at <http://www.deq.virginia.gov/Programs/PollutionResponsePreparedness/MakingaReport.aspx>.

For reports outside normal working hours, leave a message and this shall fulfill the immediate reporting requirement. For emergencies, the Virginia Department of Emergency Services maintains a 24-hour telephone service at 1-800-468-8892.

J. Notice of Planned Changes

1. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:
 - a. The permittee plans alteration or addition to any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced:
 - 1) After promulgation of standards of performance under Section 306 of Clean Water Act which are applicable to such source; or
 - 2) After proposal of standards of performance in accordance with Section 306 of Clean Water Act which are applicable to such source, but only if the standards are promulgated in accordance with Section 306 within 120 days of their proposal;
 - b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations nor to notification requirements specified elsewhere in this permit; or
 - c. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
2. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

K. Signatory Requirements

1. Applications. All permit applications shall be signed as follows:
 - a. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:
 - 1) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or
 - 2) The manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;
 - b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
 - c. For a municipality, state, federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a public agency includes:
 - 1) The chief executive officer of the agency, or
 - 2) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

2. Reports, etc. All reports required by permits, and other information requested by the Board shall be signed by a person described in Part II.K.1., or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - a. The authorization is made in writing by a person described in Part II.K.1.;
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and
 - c. The written authorization is submitted to the Department.
3. Changes to authorization. If an authorization under Part II.K.2. is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Part II.K.2. shall be submitted to the Department prior to or together with any reports, or information to be signed by an authorized representative.
4. Certification. Any person signing a document under Parts II, K.1. or K.2. shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

L. Duty to Comply

The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the State Water Control Law and the Clean Water Act, except that noncompliance with certain provisions of this permit may constitute a violation of the State Water Control Law but not the Clean Water Act. Permit noncompliance is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if this permit has not yet been modified to incorporate the requirement.

M. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee shall apply for and obtain a new permit. All permittees with a currently effective permit shall submit a new application at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Board. The Board shall not grant permission for applications to be submitted later than the expiration date of the existing permit.

N. Effect of a Permit

This permit does not convey any property rights in either real or personal property or any exclusive privileges, nor does it authorize any injury to private property or invasion of personal rights, or any infringement of federal, state or local law or regulations.

O. State Law

Nothing in this permit shall be construed to preclude the institution of any legal action under, or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any other state law or regulation or under authority preserved by Section 510 of the Clean Water Act. Except as provided in permit conditions on "bypassing" (Part II.U.), and "upset" (Part II.V.) nothing in this permit shall be construed to relieve the permittee from civil and criminal penalties for noncompliance.

P. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Sections 62.1-44.34:14 through 62.1-44.34:23 of the State Water Control Law.

Q. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes effective plant performance, adequate funding, adequate staffing, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by the permittee only when the operation is necessary to achieve compliance with the conditions of this permit.

R. Disposal of Solids or Sludges

Solids, sludges or other pollutants removed in the course of treatment or management of pollutants shall be disposed of in a manner so as to prevent any pollutant from such materials from entering state waters.

S. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

T. Need to Halt or Reduce Activity not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

U. Bypass

1. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Parts II, U.2. and U.3.
2. Notice
 - a. Anticipated bypass. If the permittee knows in advance of the need for a bypass, prior notice shall be submitted, if possible at least ten days before the date of the bypass.
 - b. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Part II.I.
3. Prohibition of bypass.
 - a. Bypass is prohibited, and the Board may take enforcement action against a permittee for bypass, unless:
 - 1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

- 2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 - 3) The permittee submitted notices as required under Part II.U.2.
- b. The Board may approve an anticipated bypass, after considering its adverse effects, if the Board determines that it will meet the three conditions listed above in Part II.U.3.a.

V. Upset

1. An upset constitutes an affirmative defense to an action brought for noncompliance with technology based permit effluent limitations if the requirements of Part II.V.2. are met. A determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is not a final administrative action subject to judicial review.
2. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - a. An upset occurred and that the permittee can identify the cause(s) of the upset;
 - b. The permitted facility was at the time being properly operated;
 - c. The permittee submitted notice of the upset as required in Part II.I.; and
 - d. The permittee complied with any remedial measures required under Part II.S.
3. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

W. Inspection and Entry

The permittee shall allow the Director, or an authorized representative, upon presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act and the State Water Control Law, any substances or parameters at any location.

For purposes of this section, the time for inspection shall be deemed reasonable during regular business hours, and whenever the facility is discharging. Nothing contained herein shall make an inspection unreasonable during an emergency.

X. Permit Actions

Permits may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

Y. Transfer of permits

1. Permits are not transferable to any person except after notice to the Department. Except as provided in Part II.Y.2., a permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued, or a minor modification made, to identify the new permittee and incorporate such other requirements as may be necessary under the State Water Control Law and the Clean Water Act.
2. As an alternative to transfers under Part II.Y.1., this permit may be automatically transferred to a new permittee if:
 - a. The current permittee notifies the Department at least 30 days in advance of the proposed transfer of the title to the facility or property;
 - b. The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them; and
 - c. The Board does not notify the existing permittee and the proposed new permittee of its intent to modify or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in Part II.Y.2.b.

Z. Severability

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

RECLAMATION AND REUSE CONDITIONS AND REQUIREMENTS

A. Standards and Monitoring Requirements

Level 1 Reclaimed Water (Outfall 650).

During the period beginning with the issuance of a Certificate to Operate (CTO) for the reclamation system and ending with the permit expiration date, the permittee is required to monitor pollutants in the Level 1 reclaimed water as described below for reuses specified in the Reclaimed Water Management Plan:

Parameter	Standard ⁽¹⁾	Units	Frequency	Sample Type
<i>E. coli</i> ^{(2) (3) (4)}	Monthly Geometric mean: ≤ 11	Colonies/100 mL	1/D	Grab
	CAT: > 35	Colonies/100 mL	NA	Grab
pH ⁽⁵⁾	6.0 – 9.0	Standard Units	1/D	Grab
cBOD ₅	Monthly average: ≤ 8	mg/L	5D/W	24-HC
Turbidity ^{(6) (7) (8)}	Daily average: ≤ 2	NTU	Continuous	Recorded
	CAT: > 5	NTU	Continuous	Recorded
Reclamation System Flow ⁽⁹⁾	Monthly average: NL	MGD	Continuous	TIRE
	Monthly maximum: NL	MGD	Continuous	TIRE

CAT = Corrective action threshold.

NA = Not applicable.

1/D = Once every day.

MGD = Million gallons per day.

NL = No limit; monitor and report.

5D/W = Five times every week.

NTU = Nephelometric turbidity unit.

TIRE = Totalizing, indicating and recording equipment.

24-HC = A flow proportional composite sample collected manually or automatically, and discretely or continuously, for the entire discharge of the monitored 24-hour period. Where discrete sampling is employed, the permittee shall collect a minimum of twenty-four (24) aliquots for compositing. Discrete sampling may be flow proportioned either by varying the time interval between each aliquot or the volume of each aliquot. Time composite samples consisting of a minimum of twenty-four (24) grab samples obtained at hourly or smaller intervals may be collected where the permittee demonstrates that the discharge flow rate (gallons per minute) does not vary by 10% or more during the monitored discharge.

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

⁽¹⁾ Level 1 standards must be met at the point of compliance (POC) designated as internal outfall 650.

⁽²⁾ After disinfection.

⁽³⁾ For the purpose of calculating the geometric mean, bacterial analytical results below the detection level of the analytical method used shall be reported as values equal to the detection level.

⁽⁴⁾ Bacterial samples shall be collected between 10 AM and 4 PM to coincide with peak flows to the reclamation system.

⁽⁵⁾ A pH meter shall be used for all pH analysis of reclaimed water.

⁽⁶⁾ Turbidity analysis shall be performed by a continuous, online turbidity meter equipped with an automated data logging or recording device and an alarm to notify the operator when the CAT for turbidity in the standard for Level 1 has been reached. Compliance with the average turbidity standard shall be determined daily, based on the arithmetic mean of hourly or more frequent discrete measurements recorded during a 24-hour period. See Part III.B.5 for additional information regarding turbidity monitoring.

⁽⁷⁾ Daily average is the arithmetic mean of hourly or more frequent discrete turbidity measurements recorded during a 24-hour period.

⁽⁸⁾ The POC shall be prior to disinfection.

⁽⁹⁾ The designated design capacity for the reclamation system is 2 MGD.

Results for the above parameters shall be included in the monthly monitoring report submitted to DEQ-NRO by the 10th of each month for the preceding month's performance.

(The remainder of this page intentionally left blank)

B. Special Conditions for Water Reclamation and Reuse**1. Prohibitions for Reclamation and Reuse**

The following are prohibited:

- a. Direct potable reuse;
- b. The reuse of reclaimed water distributed to one-family or two-family dwellings. This prohibition does not apply to reuses of reclaimed water outside of and on the same property as one-family or two-family dwellings where the reclaimed water is not distributed to such reuses by way of plumbing within the dwellings;
- c. The reuse of reclaimed water to fill residential swimming pools, hot tubs or wading pools;
- d. The reuse of reclaimed water for food preparation or incorporation as an ingredient into food or beverage for human consumption;
- e. Bypass of untreated or partially treated wastewater from the reclamation system or any intermediate unit process to the point of reuse unless the bypass complies with standards and requirements specified in this permit and is for essential maintenance to assure efficient operation;
- f. The return of reclaimed water to the reclaimed water distribution system after the reclaimed water has been delivered to an end user; and
- g. Reduction of the discharge from a VPDES permitted treatment works due to diversion of source water flow for reclamation and reuse such that the physical, chemical or biological properties of the receiving state waters are affected in a manner that would cause a significant adverse impact to other beneficial uses.

2. Nuisance Conditions

There shall be no nuisance conditions (e.g. ponded water that attracts mosquitoes or other vectors; strong odors that the Department determines are the subject of frequent and wide spread complaints from the surrounding community; any condition determined by a court of law to be a nuisance condition) resulting from the distribution, storage or use of reclaimed water. All end users shall be responsible for enforcement of the special condition per the signed reuse agreements with Alexandria Renew Enterprises.

3. Reclamation and Reuse Reopener

The Board may modify or revoke and reissue this permit if any applicable standards or requirements for water reclamation and reuse promulgated under State Water Control Law or regulations promulgated there under, including the *Water Reclamation and Reuse Regulation* (9VAC25-740 et seq.), are more stringent than or are in addition to any standards or requirements for water reclamation and reuse contained in this permit.

4. Submittal of Monitoring Reports

Discharge of reclaimed water from the reclamation system and system storage facility to a reclaimed water distribution system, a non-system storage facility or directly to a reuse of the reclaimed water at any time for any duration within a monthly reporting period, shall require monitoring in accordance with Part III.A and submittal of a monthly monitoring report for the discharge.

5. Corrective Action Threshold for Turbidity

Should reclaimed water reach the corrective action threshold (CAT) for turbidity specified in Part III.A. of this permit, the operator of the reclamation system shall immediately initiate a review of treatment operations and data to identify the cause of the CAT monitoring results to bring the reclaimed water back into compliance with the standards. Resampling or diversion shall occur within one hour of first reaching the CAT. Procedures for resampling, operational review and diversion shall be as described in the approved operations and maintenance manual for the reclamation system.

If subsequent monitoring results of the resamples collected within one hour of the first CAT monitoring results for turbidity continue to reach the CAT, the reclaimed water shall be considered substandard or reject water and shall be diverted to either storage for subsequent additional treatment or retreatment or discharged to a VPDES permitted effluent disposal system provided the reject water meets applicable effluent limits. If the reclamation system is unattended, the diversion of reject water shall be initiated and performed with automatic equipment. There shall be no automatic restarts of distribution to reuse until the treatment problem is corrected. Failure to divert the substandard or reject water after one hour of CAT monitoring results shall be considered a violation of this permit.

Upon resuming discharge of reclaimed water to the reclaimed water distribution system for which the CAT was reached, resampling for turbidity shall occur within one hour to verify proper treatment.

6. Corrective Action Threshold for Bacteria

Should the reclaimed water reach the CAT for *E. coli* specified in Part III.A of this permit, the operator of the reclamation system shall immediately initiate a review of treatment operations and data to identify the cause of the CAT monitoring results to bring the reclaimed water back into compliance with the standards. Procedures for operational review shall be as described in the approved operations and maintenance (O&M) manual for the reclamation system. Two consecutive bacterial monitoring results that reach the CAT of the standards shall be considered a violation of this permit.

7. Failure to Resample

Failure to resample after determination that monitoring results are not in compliance with the CAT standards for reclaimed water in Part III.A, or to divert or discharge substandard or reject water in accordance with Part III.B.5. shall be deemed a violation of this permit.

8. Online Turbidity Meter

Should the online turbidity meter for the reclamation system go out of service for either planned or unplanned repair, samples shall be manually collected for turbidity analysis at four-hour intervals up to a maximum of five days. Following the period of repair (not to exceed five days), continuous, online monitoring with a turbidity meter shall resume.

9. Class Operator

The classification of the operator for the reclamation system is Class I. The permittee shall employ or contract at least one operator who holds a current Class I license and the license shall be issued in accordance with Title 54.1 of the Code of Virginia and the regulations of the Board for Waterworks and Wastewater Works Operators. The permittee shall notify DEQ-NRO in writing when compliance with this requirement is not being achieved or it is anticipated that compliance with this requirement will not be achieved. The notification shall include a statement of reasons and a prompt schedule for achieving compliance.

The reclamation system shall be manned while in operation and under the supervision of the Class I operator unless the system is equipped with remote monitoring and, as applicable, automated diversion of substandard or reject water in accordance with Part III.B.5. of this permit.

10. Operation and Maintenance Manual

Within 90 days of placing the new reclamation system into operation, the permittee shall submit to the DEQ-NRO changes to the operations and maintenance (O&M) manual for the AlexRenew Enterprises WRRF addressing the operation and maintenance of the reclamation system. These changes shall reflect the practices and procedures followed by the permittee to ensure compliance with the permit. Upon approval, these changes to the O&M manual shall be incorporated into the existing document and be an enforceable part of the permit. The operations and maintenance manual shall be maintained on site and shall, at a minimum, contain the following related to the operations and maintenance of the reclamation system:

- a. A description of unit treatment processes within the reclamation system and step-by-step instructions for the

operation of these processes;

- b. A description of all appurtenances associated with the reclamation system (i.e., storage facilities, distribution system etc.), step-by-step instructions for their operation and a description of their maintenance;
- c. Routine maintenance and schedules of maintenance for each unit treatment process in the system and components of the distribution system. Maintenance shall include, but is not be limited to, initial and routine flushing of the distribution system, measures to prevent or minimize corrosion, fouling and clogging of distribution lines; and detection and repair of broken distribution lines, flow meters or pumping equipment;
- d. The design dose and procedures for monitoring the operational dose of the ultraviolet (UV) disinfection system for the reclamation system;
- e. The criteria and equipment used to make continuous determinations of the acceptability of the reclaimed water being produced and alarm set points for parameters measured by continuous on-line monitoring equipment;
- f. Descriptions of the following that shall comply with the standard and conditions of this permit:
 - (1) Reclaimed water sampling and monitoring procedures and equipment. This shall include, but is not limited to, a description of sample handling, preservation and chemical analyses; and calibration and schedules of calibration for monitoring equipment;
 - (2) The sampling location[s] for the point[s] of compliance; and
 - (3) Control system, alarm functions, record keeping and reports;
- g. Hours of reclamation system operation, hours that the system will be staffed, procedures to be followed by the staff during a period when an operator is not present at the system and training of the staff regarding operation and maintenance of the system;
- h. The physical steps and procedures to be followed by the operator when substandard water is being produced, including resampling and operational review required in accordance with Part III.B.5 and 6. of this permit;
- i. The physical steps and procedures to be followed by the operator when the treatment works returns to normal operation and acceptable quality reclaimed water is again being produced;
- j. Responsible officials and their duties, roles and contact information;
- k. Information necessary for the proper management of sludge or residuals from reclamation treatment;
- l. A contingency plan to eliminate or minimize the potential for untreated or inadequately treated water to be delivered to reuse areas. The plan shall, among other things:
 - (1) Identifying persons responsible for implementing the contingency plan and their contact information;
 - (2) Reference the education and notification program contained within the approved Reclaimed Water Management (RWM) plan for any release of untreated or inadequately treated water to the reclaimed water distribution system;
 - (3) Describe for the ultraviolet (UV) disinfection system action to be taken in response to:
 - (a) Lamp breakage and possibly mercury release;
 - (b) Low operational UV dose, low UV intensity or high turbidity alarms;
 - (c) Failure of the upstream treatment processes or the UV disinfection system; and
 - (d) Power supply interruptions where an uninterruptable power supply is not provided for the UV disinfection system.

- (4) Describe activation of standby UV equipment to include either a standby reactor for each reactor train or a standby reactor train or activation of an alternative to standby UV equipment, such as adequate storage or other contingency arrangements, which shall manage the substandard water flow during UV disinfection failure.
- m. Location of back up or replacement parts critical to the operation of unit treatment processes within the reclamation system;
- n. A list of chemicals and materials in storage areas and the location of storage areas;
- o. Routine and unplanned inspection of the distribution system, including required inspections for the cross-connection and backflow prevention program contained in the approved RWM plan;
- p. Procedures to handle and dispose of any wastes or wastewater generated by maintenance of the distribution system in a manner protective of the environment; and
- q. A plan for inactivation or closure of the reclaimed water distribution system specifying what steps will be taken to protect the environment and public health.

11. Tank Trucks Requirements

Tank trucks used to distribute reclaimed water shall:

- a. Be clearly labeled to identify the contents of the truck as non-potable water;
- b. Not transport potable water used for drinking water or food preparation;
- c. Not transport reclaimed water that does not meet the standards specified in Part III.A of this permit unless the truck has been evacuated and properly cleaned prior to the addition of the reclaimed water; and
- d. Not be filled through on-board piping or removable hoses that may subsequently be used to fill tanks with water from a potable water supply.

12. Minimizing Losses

The reclaimed water distribution system shall be maintained to minimize losses and to ensure safe and reliable conveyance of reclaimed water, such that the reclaimed water in the distribution system will not be degraded to a quality that violates the standards in this permit for the intended reuse of the reclaimed water specified in the approved RWM plan.

13. Design

All reclamation water distribution systems authorized by this permit shall be designed in accordance with criteria as set forth in the *Water Reclamation and Reuse Regulations* (9VAC25-740 et seq.).

14. Preliminary Engineer Report

A preliminary engineering report shall be submitted for new reclamation system, satellite reclamation system or reclaimed water distribution system; or for the modification or expansion of the same facilities where they already exist. At the request of the permittee, the DEQ-NRO may waive the need for a preliminary engineering report or portions of a preliminary engineering report for modification or expansion of an existing reclamation system, satellite reclamation system or reclaimed water distribution system as determined by the scope of the proposed project.

15. CTC/CTO

The permittee shall not cause or allow the construction, expansion or modification of the reclamation system except in compliance with a certificate to construct (CTC) and shall not cause or allow the operation of the same facility except in compliance with a certificate to operate (CTO) issued by the DEQ.

16. Public Access

There shall be no uncontrolled public access to the reclamation system.

17. Advisory Signs

For all reuses of reclaimed water treated to Level 1, advisory signs or placards shall be posted within and at the boundaries of reuse areas and shall display a non-potable water warning statement and symbol and other necessary information as described in 9VAC25-740-160.

18. Placement of Advisory Signs

Advisory signs shall be posted adjacent to impoundments or ponds, including landscape impoundments.

19. Advisory Signs for Industrial Sites

For industrial reuses, advisory signs shall be posted around those areas of the industrial site where reclaimed water is used and at the main entrances to the industrial site to notify employees and the visiting public of the reclaimed water reuse. Access control beyond what is normally provided by the industry is not required.

20. Construction and Unrestricted Irrigation Reuse Requirements

For all construction and unrestricted irrigation reuses of reclaimed water, the following shall be required:

- a. There shall be no application of reclaimed water to the ground when it is saturated, frozen or covered with ice or snow and during periods of rainfall.
- b. The chosen method of application shall minimize human contact with the reclaimed water.
- c. Reclaimed water shall be prevented from coming into contact with drinking fountains, water coolers or eating surfaces.

21. Setback Distance for Reuse

A setback distance of 100 feet horizontally shall be maintained from indoor aesthetic features (i.e. decorative waterfalls or fountains) that use reclaimed water treated to Level 1, to adjacent indoor public eating and drinking facilities where the aesthetic features have the potential to create aerosols and eating and drinking facilities are within the same room or building space.

22. Reclaimed Water Failure

Where treatment of the reclaimed water fails more than once during a seven-day period to comply with Level 1 disinfection contained in Part III.A of this permit for the protection of human health, and the non-compliant reclaimed water has been discharged to the reclaimed water distribution system, the permittee shall notify the end user in accordance with the permittee's approved education and notification program of the treatment failures and advise the end user of precautions to be taken to protect public health when using the reclaimed water in areas accessible to the public or where human contact with the reclaimed water is likely. These precautions shall be implemented for a minimum of seven days. Where reclaimed water service to end users will be interrupted due to planned causes, such as scheduled repairs, the permittee shall provide advance notice to end users of the anticipated date and duration of the interrupted service. Where reclaimed water service to end users is disrupted by unplanned causes, such as an upset at the reclamation system, the permittee shall notify end users and the affected public of the disrupted service if it cannot or will not be restored within eight hours of discovery.

The permittee shall also describe and report all notifications of end users and the affected public for causes described above.

23. New End Users or Reuses

For the addition of new end users or new reuses not contained in the original RWM plan submitted with the permit application, the permittee shall submit to DEQ-NRO an amendment to the RWM plan identifying new end users or new reuses not less than 90 days prior to connection and reclaimed water service to the new users or initiating the new reuses. For each new end user or new reuse, the permittee shall also provide all applicable information required by the *Water Reclamation and Reuse Application Addendum*. Should the addition of new end users or new reuses to the RWM plan require the incorporation of additional or different reclaimed water standards, monitoring requirements or special conditions into this permit, modification of the permit may be necessary to authorize distribution of reclaimed water to the new users or to authorize the new reuses.

24. Interruption of Reclaimed Water Supply

For each interruption or loss of reclaimed water supply, the permittee shall report to DEQ-NRO in writing the following information at the time the next reclamation and reuse monthly monitoring report is submitted:

- a. The service area affected by the interruption or loss of reclaimed water supply;
- b. The initial date and time of the interruption or loss of reclaimed water supply and duration;
- c. The cause of interruption or loss of reclaimed water supply, additionally indicating whether the cause was planned or unplanned; and
- d. If the interruption was unplanned, describe the steps taken to correct the problem and to prevent the problem from recurring.

This report shall also contain a description of any notification provided in accordance with the education and notification program of the approved RWM plan.

25. Noncompliance Notification

Each discharge of any untreated or partially treated water to the service area of intended reuse that fails to comply with reclaimed water standards contained in Part III.A shall be reported by the permittee to DEQ-NRO as a noncompliance in accordance with Part II.I of this permit.

This report shall also contain a description of any notification provided in accordance with the education and notification program of the approved RWM plan.

26. System Integrity

All leaks and main breaks of the reclaimed water distribution system shall be reported by the permittee upon discovery as follows:

- a. Where the leak of main break discharges or causes or allows a discharge of reclaimed water that may reasonably be expected to enter state waters, the incident shall be reported by the permittee to DEQ-NRO as an unauthorized discharge in accordance with Part II.G of this permit.
- b. Where the leak of main break does not discharge or cause or allow a discharge of reclaimed water that may reasonably be expected to enter state waters, but may adversely affect state waters or may endanger public health, the incident shall be reported by the permittee to DEQ-NRO as a noncompliance in accordance with Part II.I. of this permit.

(The remainder of this page intentionally left blank)

27. Recordkeeping

In addition to records specified in Part II.B of this permit, the permittee shall maintain the following at the reclamation system for the period specified in Part II.B:

- a. Water reclamation and reuse operating records to include all analyses required for reclaimed water in Part III.A of this permit, records of operational problems, alarm failures, unit process and equipment breakdowns, diversions to reject storage or emergency storage, discharge to another permitted reuse system requiring a lower level of treatment, or disposal via a permitted effluent discharge; and all corrective or preventive action taken.
- b. A monthly summary of the operating records specified in a. of this condition.

28. Annual Water Reclamation and Reuse Report

The permittee shall submit an annual report for the reclaimed water distribution system covering a 12-month period from January 1st through December 31st to DEQ-NRO on or before February 10th of the following year.

The annual report shall, at a minimum, include:

- a. The estimated volume of reclaimed water distributed to the service area of the RWM plan, reported as monthly totals.
- b. A summary of ongoing education and notification program activities. The summary shall include, at a minimum:
 - (1) Copies of educational materials,
 - (2) The number and duration of notifications to end users per month for the following causes:
 - (a) More than one treatment failure within a 7-day period at the reclamation system with subsequent discharge to the reclaimed water distribution system,
 - (b) Planned disruption of reclaimed water service to end users, and
 - (c) Unplanned disruption of reclaimed water service to end users.

BIOSOLIDS CONDITIONS AND REQUIREMENTS

A. Biosolids Limitations and Monitoring Requirements

During the period beginning with the permit's effective date and lasting until the permit expiration date, the permittee is authorized to manage biosolids in accordance with 9VAC25-31-420 through 720 and 9VAC25-32-303 through 358, the limitations, conditions and requirements set forth in this permit and the approved Biosolids Management Plan.

All biosolids samples shall be collected and analyzed in accordance with Title 40 of the Code of Federal Regulations, Part 503 and 136, and the approved Biosolids Management Plan. The permittee shall ensure that all biosolids generated under authority of this permit and distributed for the purpose of land application, blending or further treatment are monitored in accordance with the monitoring requirements as specified herein.

1. Class A, Exceptional Quality Biosolids

a. Biosolids Annual Production Monitoring (SP1)

The permittee shall report the annual total amount of biosolids produced (in dry metric tons) and annual amount of Class A biosolids (in dry metric tons) distributed for the purpose of blending or land application.

Data shall be reported on the Discharge Monitoring Report (DMR) for discharge number SP1.

b. Biosolids Chemical Limitations and Monitoring Requirement (S01)

Pollutants in Class A biosolids that are generated under the authority of this permit and provided to a person who blends biosolids with other materials for distribution or a person who land applies biosolids, shall be monitored and limited as specified below. Only Class A biosolids that meet the Pollutant Concentration (PC) limitations shall be provided to a person who blends. Biosolids shall not be distributed to a blender or a person who applies to the land if the concentration of any pollutant in the biosolids exceeds the ceiling limitation of that pollutant.

Biosolids Characteristic ⁽¹⁾	PC / CPLR Limitations ⁽¹⁾	Ceiling Limitations	Monitoring Requirements	
	Monthly Average ⁽²⁾	Concentration Maximum ⁽²⁾	Frequency	Sample Type
Percent Solids (%)	NL	NA	1/Y	Composite
Arsenic, Sludge	41 mg/kg	75 mg/kg	1/Y	Composite
Cadmium, Sludge	39 mg/kg	85 mg/kg	1/Y	Composite
Copper, Sludge	1500 mg/kg	4300 mg/kg	1/Y	Composite
Lead, Sludge	300 mg/kg	840 mg/kg	1/Y	Composite
Mercury, Sludge	17 mg/kg	57 mg/kg	1/Y	Composite
Molybdenum, Sludge	NL	75 mg/kg	1/Y	Composite
Nickel, Sludge	420 mg/kg	420 mg/kg	1/Y	Composite
Selenium, Sludge	100 mg/kg	100 mg/kg	1/Y	Composite
Zinc, Sludge	2800 mg/kg	7500 mg/kg	1/Y	Composite

NA = Not applicable.

NL = No limit; monitor and report.

1/Y = Once every calendar year.

mg/kg = Milligrams per kilogram, dry weight.

⁽¹⁾ All parameters are subject to pollutant concentrations (PC), cumulative pollutant loading rates (CPLR) and ceiling limits. PC biosolids contain the constituents identified above at concentrations below the monthly average specified herein. CPLR biosolids contain the constituents identified above at concentrations above the monthly average and each sample must be below the maximum concentration specified herein.

⁽²⁾ All limits and criteria are expressed on a dry weight basis.

(The remainder of this page intentionally left blank)

c. Pathogen Reduction Requirements (S01)

Biosolids shall be treated to meet Class A Pathogen Reduction standards and the vector attraction reduction (VAR) standards and monitored to verify class A pathogen reduction prior to delivery to a person for the purposes of blending Class A biosolids for distribution and marketing or land applying biosolids. The biosolids shall be monitored and limited in accordance with the treatment option selected and used by the permittee as identified below:

Treatment Option	Class A Pathogen Reduction Treatment Standards	Monitoring Requirements
Class A Pathogen Reduction Alternative 1 or 5: Processes To Further Reduce Pathogens (PFRP): Option 7	Either the density of fecal coliform in the sewage sludge shall be less than 1,000 Most Probable Number per gram of total solids (dry weight basis), or the density of Salmonella, sp. Bacteria in the sewage sludge shall be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed; or at the time the sewage sludge is prepared for sale or give away in a bag or other container for application to the land; or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements in 9VAC25-31-510 B, C, E or F.	1/Y ⁽¹⁾
	Pasteurization. The temperature of the sewage sludge is maintained at 70° C or higher for 30 minutes or longer (9VAC25-31-710.E.7).	(2)
VAR Option 1	The mass of volatile solids in the sewage sludge shall be reduced by a minimum of 38%, calculated according to the method in 9VAC25-31-490.B.8.	1/Y ⁽¹⁾

⁽¹⁾ Between sampling events, operating records shall demonstrate that the wastewater treatment plant (WWTP) is operating at a performance level known to meet pathogen reduction and VAR standards.

⁽²⁾ Process monitoring shall be sufficient to demonstrate compliance with PFRP and VAR treatment requirements.

(The remainder of this page intentionally left blank)

2. Class B Biosolids

a. Biosolids Annual Production Monitoring (SP2)

The permittee shall report the annual total amount of biosolids produced (in dry metric tons) and annual amount of Class B biosolids (in dry metric tons) distributed for land application.

Data shall be reported on the Discharge Monitoring Report (DMR) for discharge number SP2.

b. Biosolids Chemical Limitations and Monitoring Requirement (S02)

Pollutants in Class B biosolids that are generated and provided to a land applier under the authority of this permit shall be monitored and limited as specified below. Biosolids shall not be provided for land application if the concentration of any pollutant in the biosolids exceeds the ceiling limitation of that pollutant.

Biosolids Characteristic ⁽¹⁾	PC / CPLR Limitations ⁽¹⁾	Ceiling Limitations	Monitoring Requirements	
	<u>Monthly Average</u> ⁽²⁾	<u>Concentration Maximum</u> ⁽²⁾	<u>Frequency</u>	<u>Sample Type</u>
Percent Solids (%)	NL	NA	1/Y	Composite
Arsenic, Sludge	41 mg/kg	75 mg/kg	1/Y	Composite
Cadmium, Sludge	39 mg/kg	85 mg/kg	1/Y	Composite
Copper, Sludge	1500 mg/kg	4300 mg/kg	1/Y	Composite
Lead, Sludge	300 mg/kg	840 mg/kg	1/Y	Composite
Mercury, Sludge	17 mg/kg	57 mg/kg	1/Y	Composite
Molybdenum, Sludge	NL	75 mg/kg	1/Y	Composite
Nickel, Sludge	420 mg/kg	420 mg/kg	1/Y	Composite
Selenium, Sludge	100 mg/kg	100 mg/kg	1/Y	Composite
Zinc, Sludge	2800 mg/kg	7500 mg/kg	1/Y	Composite

NA = Not applicable.

NL = No limit, monitor and report.

1/Y = Once every calendar year.

mg/kg = Milligrams per kilogram, dry weight.

⁽¹⁾ All parameters are subject to pollutant concentrations (PC), cumulative pollutant loading rates (CPLR), and ceiling limits. PC biosolids contain the constituents identified above at concentrations below the monthly average specified herein. CPLR biosolids contain the constituents identified above at concentrations above the monthly average and each sample must be below the maximum concentration specified herein.

⁽²⁾ All limits and criteria are expressed on a dry weight basis.

(The remainder of this page intentionally left blank)

c. Pathogen Reduction and Vector Attraction Reduction (VAR) Requirements (S02)

Biosolids generated and provided to a land applier under this permit shall be treated to meet a Class B Pathogen Reduction Alternative and one VAR Option 1 - 8 prior to delivery to the land application site. The Class B Biosolids shall be monitored and limited in accordance with the treatment options selected and used by the generator, as identified in the table below. The permittee will have a system in place to verify that all Class B Biosolids generated and provided to a land applier under this permit meet these pathogen reduction and VAR standards and treatment requirements.

Treatment Option			
Pathogen Reduction Alternative	Process to Significantly Reduce Pathogens (PSRP) Option	Class B Pathogen Reduction & Vector Attraction Reduction (VAR) Treatment and Standards	Monitoring Requirements
2	3	PSRP: Anaerobic digestion for a mean cell residence time between 15 days at 35° C – 55° C up to 60 days at 20° C. (9VAC25-31-710.D.3.)	1/Y ^{(1) (2)}
VAR Option 1		The mass of volatile solids in the sewage sludge shall be reduced by a minimum of 38%, calculated according to the method in 9VAC25-31-490.B.8.	1/Y ^{(1) (2)}

1/Y = Once every calendar year.

⁽¹⁾ Between sampling events, operating records must demonstrate that the Wastewater Treatment Plant (WWTP) is operating at a performance level known to meet pathogen reduction and VAR standards.

⁽²⁾ Process monitoring must be sufficient to demonstrate compliance with PSRP and VAR treatment requirements.

(The remainder of this page intentionally left blank)

B. Biosolids Management and Reporting Requirements**1. Approved Biosolids Source Requirement**

Only biosolids from a source that has been approved by the DEQ, as identified on the DEQ's *Sources of Biosolids, Industrial Sludges, WTP Residuals* list and treated to meet metals limits, pathogen reduction and VAR standards as set forth in Part IV of this permit, shall be given to any person for the purpose of blending or land application.

2. Biosolids Monitoring Frequency and Reporting Requirements**a. Monitoring Frequency**

The monitoring frequency shall be once per calendar year (1/Y). The monitoring frequency may be increased during this permit term upon written notification by DEQ if deemed necessary.

b. Annual Report

The permittee shall submit an Annual Report not later than February 19th of each year to the DEQ-Northern Regional Office. Each report is for the previous calendar year's activity. If no biosolids were generated and provided to a land applier under this permit during the reporting year, a report shall be submitted stating that no biosolids were generated or delivered during the year.

The report shall include at minimum:

- 1) Part IV.A.1.a and Part IV.A.2.a Sewage Sludge Annual Production Monitoring;
- 2) Biosolids Monitoring Data:
 - a) Part IV.A.1.b and Part IV.A.2.b Biosolids – Metals Limitations;
 - b) Part IV.A.1.c and Part IV.A.2.c Biosolids – Pathogen Reduction and Vector Attraction Reduction (VAR) Requirements; and
 - c) Supporting documentation, including laboratory chain of custody forms and certificates of analyses, shall be submitted with the report;
- 3) A summary of biosolids disposal contracts, if any, currently held with other generators, as well as any other biosolids or sludges currently being handled through subcontracts or other agreements. Include biosolids or sludges given to other generators, contractors or land filled and biosolids or sludges accepted from other generators for treatment or land application;
- 4) Identify other methods used to dispose of or use biosolids or sludge produced during the previous calendar year. Report the annual total amount of biosolids or sludge (in dry metric tons) disposed of or used by each method identified; and
- 5) The annual report shall be certified and signed in accordance with Part II.K.

3. Record Keeping

The permittee is required to retain the following information for at least five years:

- a. The concentrations of each pollutant in Parts IV.A.1.b and IV.A.2.b;
- b. A description of how the pathogen reduction requirements in Parts IV.A.1.c and IV.A.2.c are met;
- c. A description of how the vector attraction reduction requirements in Parts IV.A.1.c and IV.A.2.c are met;

- d. A description of how the management practices specified in the approved Biosolids Management Plan and this permit are met;
- e. The Notice and Necessary Information required in Part IV.B.4; and
- f. The following certification statement:

"I certify, under penalty of law, that the information that will be used to determine compliance with the Class A pathogen requirements in 9VAC25-31-710.A, the Class B pathogen requirements in 9VAC25-31-710.B.6 and the vector attraction reduction requirements in 9VAC25-31-720.B.6 was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment".

4. Notice and Necessary Information (NANI)

A NANI shall be provided to any person to whom biosolids are provided for the purpose of further treatment, blending or land application. The NANI shall be provided at the time the biosolids are provided if available, but no later than 45 days after the last day of the month in which biosolids were provided. The NANI shall represent the most recent monitoring period.

The NANI shall include at a minimum:

- a. A statement that Class A or Class B pathogen requirements in 9VAC25-31-710.A – B were met and the alternative used;
- b. A statement that one of the VAR requirements in 9VAC25-31-720.B.1 through B.8 was met and the alternative used; or
- c. A statement that one of the VAR requirements in 9VAC25-31-720.B.1 through B.8 was not met and incorporation or injection was required;
- d. The notice(s) provided to the land applier when biosolids provided did not meet VAR and required incorporation or injection;
- e. The concentration of total nitrogen (as N on a dry weight basis) of the biosolids; and
- f. The following certification statement:

"I certify, under penalty of law, that the information that will be used to determine compliance with the Class B pathogen requirements in 9VAC25-31-710.B or Class A pathogen requirements in 9VAC25-31-710.A and the VAR requirement in 9VAC25-31-720.B.6 was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification, including the possibility of fine and imprisonment".

5. Biosolids Management Plan (BSMP)

- a. The permittee shall conduct all biosolids/sewage sludge use or disposal activities in accordance with the Biosolids Management Plan approved with the issuance of this permit. The permittee shall maintain the BSMP which consists of the following components:
 - 1) The materials developed and submitted at the time of permit application or permit modification in accordance with 9VAC25-31-100.Q;
 - 2) The Operations and Maintenance (O&M) Manual (sections regarding solids handling and biosolids production and management, etc); and
 - 3) The Odor Control Plan (OCP). The OCP shall include at a minimum:

- a) Methods used to minimize odor in producing biosolids;
- b) Methods used to identify malodorous biosolids before delivery to the land applier (at the generating facility);
- c) Methods used to identify and abate malodorous biosolids if delivered to the field, prior to land application; and
- d) Methods used to abate malodor from biosolids if land applied.

b. The BSMP and all of its components shall be incorporated by reference and is an enforceable part of this permit.

6. Biosolids/Sludge Reopener

The Board may promptly modify or revoke and reissue this permit if any applicable standard for biosolids and/or sewage sludge use or disposal promulgated under Section 405(d) of the Clean Water Act is more stringent than any requirements for biosolids/sludge use or disposal in this permit, or controls a pollutant or practice not limited within this permit.

7. Biosolids Use and Disposal

The permittee shall conduct all biosolids use or disposal activities in accordance with the Biosolids Management Plan approved with the issuance of this permit. Any proposed changes in the biosolids use or disposal practices or procedures followed by the permittee shall be documented and submitted for DEQ-Northern Regional Office (DEQ-NRO) approval 90 days prior to the effective date of the changes. Upon approval, the revised Biosolids Management Plan shall be incorporated by reference and becomes an enforceable part of the permit. The permit may be modified or alternatively revoked and reissued to incorporate limitations or conditions necessitated by substantive changes in biosolids use or disposal practices.